

ELECTRO-THERMALLY ACTUATED LATERAL-CONTACT MICRORELAY AND ASSOCIATED MANUFACTURING PROCESS

ABSTRACT

One embodiment of the present invention relates to a lateral-contact microrelay with an electro-thermal actuator. This microrelay includes a contact head configured to make an electrical connection between a first signal line and a second signal line. It also includes an electro-thermal actuator, which is coupled to the contact head and is configured to laterally displace the contact head so that the closing action of the contact head is parallel to the plane of the semiconductor wafer upon which the microrelay is fabricated. In a variation on this embodiment, the electro-thermal actuator comprises a substantially V-shaped beam, wherein thermal expansion caused by current flowing through the substantially V-shaped beam actuates the contact head to make the electrical connection between the first signal line and the second signal line.